



Summary of 2018 Northern Pike Suppression Results on Boundary Reservoir, Pend Oreille River, WA.

During the third year of mechanical suppression of Northern Pike (NP) in Boundary Reservoir a total of 185 nets were deployed with 132 Northern Pike removed between March 12 and April 24, with a final catch-per-unit-effort (CPUE) of 0.71 NP/net-night. The Kalispel Natural Resources Department collected 16 Northern Pike during the 2018 Spring Pike Index Netting (SPIN) Survey conducted May 7 through May 10. The resulting CPUE of 0.40 NP/ net-night (95% CI: ± 0.24), in sloughs and mainstem river between Box Canyon Dam and Metaline Falls, meeting the abundance target of ≤ 0.50 NP/net-night for these sections of the reservoir.

In total, 546 NP were removed in 366 overnight gillnet sets during the suppression effort in Boundary Reservoir through 2018.

Mechanical Removal:

- Netting took place from 3/12/18 - 4/24/18
- Netting locations were concentrated from Box Canyon Dam to Metaline Falls (upper reservoir) with one overnight set between Metaline Falls and Boundary Dam
- Collected biological information such as weight, length, sex and maturity on all NP collected
- Total nets deployed: 185
- Overall CPUE: 0.71 NP/net-night

Northern Pike catch summary (Table 1):

- Total catch: 132 NP, 0.26 mT (570 lbs.)
- Overall size range: 345 mm to 960 mm TL (14-38 inches), weight: 214 g to 9,300 g (0.5 to 21.2 lbs.)
- Males averaged 621 mm TL (24 inches), 1,730 g (3.8 lbs.)
- Females averaged 653 mm TL (26 inches), 2,200 g (4.9 lbs.)
- Females made up an estimated 55% of the total catch, of which an estimated 81% were sexually mature (Table 2)
- Removed 14 immature females
- 15% of NP catch was less than 450 mm TL (18 inches)

Mechanical Suppression Bycatch Summary:

- 18 fish species, 407 individuals (Table 3)

Spring Pike Index Netting

- Netting took place 5/7/18 – 5/10/18
- Net placement sites were selected using a spatially balanced random sampling design focused on the upper section of the reservoir (Metaline Falls to Box Canyon Dam)
- One 3-person crews deployed 10-15 nets/day
- Collected biological information such as weight, length, sex and maturity on all NP collected
- Total nets deployed: 40
- CPUE for mainstem river sites was 0.0 NP/net-night; CPUE for sloughs sites was 0.53 NP/net-night.

SPIN catch summary (Table 1)

- Total catch: 16 NP, 0.014 mT (30.8 lbs.)
- Overall size range: 380 mm to 820 mm TL (15-32 inches), 348 g to 4,386 g (0.8-9.7 lbs.)
- Males averaged 421 mm TL (20 inches), 511 g (1.1 lb)
- Females averaged 568 mm TL (21.5 inches), 1,671 g (3.7 lb)
- Females made up an estimated 31% of the total catch, of which an estimated 40% were mature
- Removed 2 mature females and 3 immature females
- 87% of NP catch was less than 450 mm TL (18 inches)

Tables and Figures

Table 1. Data summary and statistics for the 2018 Northern Pike suppression effort and SPIN survey in Boundary Reservoir.

	Suppression	SPIN Survey
Sampling Dates:	March 12 to April 24	May 7 to May 10
Days per Week:	4	4
Nets/Day:	11-30	10-15
Total Nets:	185	40
NP Catch-Per-Unit-Effort (CPUE):		
Overall CPUE:	0.71	0.40
		Sloughs: 0.53
		River: 0.0
Percent Positive Catch:	37%	30%
Most northern pike in one net:	7	4
NP Catch Statistics:		
Total Number:	132	16
Total Weight:	0. mT (570 pounds)	0.014 mT (30.8 pounds)
Total Length Range:	345 mm to 960 mm	380 mm to 820 mm
Weight Range:	214 g to 9,300 g	348 g to 4,386 g
Mean TL Males:	621 mm	421 mm
Mean TL Females:	653 mm	568 mm
Sex Ratio (% female):	55%	31%
Juvenile Catch (<450 mm):	15%	87%

Table 2. Estimated maturity rates of all Northern Pike removed during 2018 mechanical suppression efforts in Boundary Reservoir.

Sex	Immature	Mature	Ripe	Spawned Out
Female	60%	0%	20%	20%
Male	55%	18%	27%	0%

Table 3. Summary of fish bycatch captured during the 2018 Northern Pike mechanical suppression effort in Boundary Reservoir.

Common Name	Species Name	Number	% of Total
Salmonidae			
Rainbow Trout	<i>Oncorhynchus mykiss</i>	14	3.44
Lake Whitefish	<i>Coregonus clupeaformis</i>	4	0.98
Eastern Brook Trout	<i>Salvelinus fontinalis</i>	1	0.25
Brown Trout	<i>Salmo trutta</i>	10	2.46
Westslope Cutthroat Trout	<i>Oncorhynchus clarki lewisi</i>	7	1.72
Lake Trout	<i>Salvelinus namaycush</i>	6	1.47
Cyprinidae			
Peamouth	<i>Mylocheilus caurinus</i>	1	0.25
Northern Pikeminnow	<i>Ptychocheilus oregonensis</i>	27	6.63
Tench	<i>Tinca tinca</i>	14	3.44
Catostomidae			
Longnose Sucker	<i>Catostomus catostomus</i>	6	1.47
Largescale Sucker	<i>Catostomus macrocheilus</i>	95	23.34
Ictaluridae			
Brown Bullhead	<i>Ameiurus nebulosus</i>	1	0.25
Centrarchidae			
Pumpkinseed	<i>Lopomis gibbosis</i>	3	0.74
Smallmouth Bass	<i>Micropterus dolomieu</i>	6	1.47
Largemouth Bass	<i>Micropterus salmoides</i>	3	0.74
Black Crappie	<i>Pomoxis nigromaculatus</i>	4	0.98
Percidae			
Yellow Perch	<i>Perca flavescens</i>	146	35.87
Walleye	<i>Stizostedion vitreum</i>	59	14.50
Grand Total (all species)		407	100